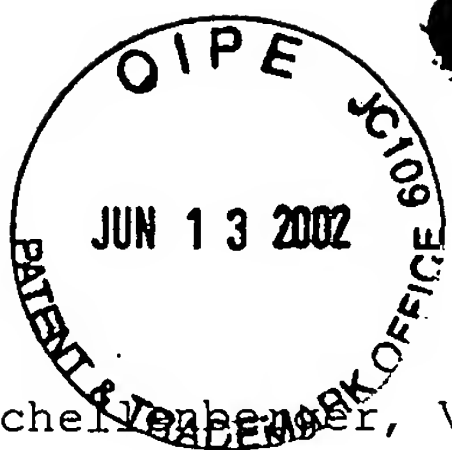


#6



SEQUENCE LISTING

<110> Scheinberger, Volker

<120> Targeted Enzyme Prodrug Therapy

<130> GC714

<140> US 10/022,097

<141> 2001-12-13

<150> US 60/279,609

<151> 2001-03-28

<150> US 60/255,774

<151> 2000-12-14

<160> 43

<170> FastSEQ for Windows Version 4.0

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<212> PRT

<213> Enterobacter cloacae

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Thr	Pro	Leu	Met	Lys	Ala	Gln	Ser	Val	Pro	Gly	Met	Ala	Val	Ala	Val	
			20					25					30			
Ile	Tyr	Gln	Gly	Lys	Pro	His	Tyr	Tyr	Thr	Phe	Gly	Lys	Ala	Asp	Ile	
		35					40					45				
Ala	Ala	Asn	Lys	Pro	Val	Thr	Pro	Gln	Thr	Leu	Phe	Glu	Leu	Gly	Ser	
	50					55					60					
Ile	Ser	Lys	Thr	Phe	Thr	Gly	Val	Leu	Gly	Gly	Asp	Ala	Ile	Ala	Arg	
65					70				75						80	
Gly	Glu	Ile	Ser	Leu	Asp	Asp	Ala	Val	Thr	Arg	Tyr	Trp	Pro	Gln	Leu	
			85					90					95			
Thr	Gly	Lys	Gln	Trp	Gln	Gly	Ile	Arg	Met	Leu	Asp	Leu	Ala	Thr	Tyr	
		100						105					110			
Thr	Ala	Gly	Gly	Leu	Pro	Leu	Gln	Val	Pro	Asp	Glu	Val	Thr	Asp	Asn	
	115						120					125				
Ala	Ser	Leu	Leu	Arg	Phe	Tyr	Gln	Asn	Trp	Gln	Pro	Gln	Trp	Lys	Pro	
	130					135					140					
Gly	Thr	Thr	Arg	Leu	Tyr	Ala	Asn	Ala	Ser	Ile	Leu	Gly	Phe	Gly	Ala	
145					150				155						160	
Leu	Ala	Val	Lys	Pro	Ser	Gly	Met	Pro	Tyr	Glu	Gln	Ala	Met	Thr	Thr	
			165					170					175			
Arg	Val	Leu	Lys	Pro	Leu	Lys	Leu	Asp	His	Thr	Trp	Ile	Asn	Val	Pro	
		180						185					190			
Lys	Ala	Glu	Glu	Ala	His	Tyr	Ala	Trp	Gly	Tyr	Arg	Asp	Gly	Lys	Ala	
	195					200						205				
Val	Arg	Val	Ser	Pro	Gly	Met	Leu	Asp	Ala	Gln	Ala	Tyr	Gly	Val	Lys	
	210					215					220					

Thr	Asn	Val	Gln	Asp	Met	Ala	Asn	Trp	Val	Met	Ala	Asn	Met	Ala	Pro
225					230					235					240
Glu	Asn	Val	Ala	Asp	Ala	Ser	Leu	Lys	Gln	Gly	Ile	Ala	Leu	Ala	Gln
			245						250					255	
Ser	Arg	Tyr	Trp	Arg	Ile	Gly	Ser	Met	Tyr	Gln	Gly	Leu	Gly	Trp	Glu
			260					265					270		
Met	Leu	Asn	Trp	Pro	Val	Glu	Ala	Asn	Thr	Val	Val	Glu	Gly	Ser	Asp
		275					280					285			
Ser	Lys	Val	Ala	Leu	Ala	Pro	Leu	Pro	Val	Ala	Glu	Val	Asn	Pro	Pro
	290					295					300				
Ala	Pro	Pro	Val	Lys	Ala	Ser	Trp	Val	His	Lys	Thr	Gly	Ser	Thr	Gly
305					310					315					320
Gly	Phe	Gly	Ser	Tyr	Val	Ala	Phe	Ile	Pro	Glu	Lys	Gln	Ile	Gly	Ile
			325						330					335	
Val	Met	Leu	Ala	Asn	Thr	Ser	Tyr	Pro	Asn	Pro	Ala	Arg	Val	Glu	Ala
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Ala	Tyr	His	Ile	Leu	Glu	Ala	Leu	Gln							
		355					360								

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<400> 2
 Arg Leu Tyr Ala Asn Ala Ser Ile
 1 5

<210> 3
 <211> 8
 <212> PRT
 <213> Enterobacter cloacae

<400> 3
 Val His Lys Thr Gly Ser Thr Gly
 1 5

<210> 4
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 4
 gggcccgac atccaaagct tgctgacagg aagcggaaca cgtagaaagc

50

<210> 5
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 5

aagctttgga tgtccggggcc cgaattcgtg tgaaattggt atccgctcac 50

<210> 6
 <211> 88
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetic oligonucleotide

<221> misc_feature
 <222> (1)...(88)
 <223> n = A,T,C or G

<400> 6
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 actattacac atttggcaag gccgacat 88

<210> 7
 <211> 88
 <212> DNA
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<220>
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<221> misc_feature
 <222> (1)...(88)
 <223> n = A,T,C or G

<400> 7
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 snnataaata acggccaccg ccatgcct 88

<210> 8
 <211> 74
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 8
 ctaggtcttc tactagttta attgtcttag tcgtagctcc atctgcagtt gaagactctc 60
 tactggcggg ttg 74

<210> 9
 <211> 77
 <212> DNA
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<220>
 <223> primer

<221> misc_feature
 <222> (1)...(77)
 <223> n = A,T,C or G

<400> 9
 cgcttgccgcc gttgcccgtg gcagaagtga atnnsnnsnn snnsnnsnns nnsnnstcct 60
 ggggccataa aactggc 77

<210> 10
 <211> 77
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<221> misc_feature
 <222> (1)...(77)
 <223> n = A,T,C or G

<400> 10
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 ccacgggcaa cggcgca 77

<210> 11
 <211> 95
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<221> misc_feature
 <222> (1)...(95)
 <223> n = A,T,C or G

<400> 11
 cgcttgccgcc gttgcccgtg gcagaagtga atnnsnnsnn snnsnnsnns nnsnnsnnsn 60
 nsnnnsnnsnn snnstcctgg gtccataaaa ctggc 95

<210> 12
 <211> 95
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<221> misc_feature
 <222> (1)...(95)
 <223> n = A,T,C or G

<400> 12
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 nsnnnsnatt cacttctgcc acgggcaacg gcgca 95

<210> 13
 <211> 95
 <212> DNA
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<220>
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 <221> misc_feature
 <222> (1)...(95)
 <223> n = A,T,C or G

 <400> 13
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 hcsngdhcsn gdhctcctgg gtccataaaa ctggc 95

 <210> 14
 <211> 28
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 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 14
 attcacttct gccacgggca acggcgca 28

 <210> 15
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 15
 tagagccagt tttatggacc cagga 25

 <210> 16
 <211> 84
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 16
 tggcccgcgg ccgctaattg tcttaggcgg atgccatgtg cagtactaga agacggcgta 60
 tcgggtcaat gtatcagggt ctcg 84

 <210> 17
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 17
 agacaattag cggccgcggg ccatgt 26

<210> 18
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 18
 cagccgagac cctgatacat tgacccga 28

 <210> 19
 <211> 68
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <221> misc_feature
 <222> (1)...(68)
 <223> n = A,T,C or G

 <400> 19
 tggccccgga gnnsnnsnns nnsnnsnsc ttaagcaggg catcgcgctg gcgcagtcgc 60
 gctactgg 68

 <210> 20
 <211> 75
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <221> misc_feature
 <222> (1)...(75)
 <223> n = A,T,C or G

 <400> 20
 tacgccagta gcgcgactgc gccagcgcga tgccctgctt aagsnnsnns nnsnnsnnsn 60
 nctccggggc catgt 75

 <210> 21
 <211> 80
 <212> DNA
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 <220>
 <223> primer

 <221> misc_feature
 <222> (1)...(80)
 <223> n = A,T,C or G

 <400> 21
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tggcgcagtc ggcgtactgg

80

<210> 22

<211> 87

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<221> misc_feature

<222> (1)...(87)

<223> n = A,T,C or G

<400> 22

tacgccagta ggcgcactgc gccagcgcca tgccctgctt aagsnnsnns nnsnnsnnsn
nnsnnsnnsn snnctccggg gccatgt

60

87

<210> 23

<211> 76

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 23

gtgttccagg tcttctacta gtttaattgt cttaggcgga tgccatgtgc tcgtagctcc
atctgcagtt gaagac

60

76

<210> 24

<211> 88

<212> DNA

<213> Artificial Sequence

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<223> synthetic oligonucleotide

<221> misc_feature

<222> (1)...(88)

<223> n = A,T,C or G

<400> 24

ttccaggcat ggcggtggcc gttatztatn nsnnsnnsn snnsnnsnns nnsaaaccgc
actattacac atttggaag gccgacat

60

88

<210> 25

<211> 74

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 25

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tactggcggg tttg

60

74

<210> 26
<211> 95
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<220>
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<221> misc_feature
<222> (1)...(95)
<223> n = A,T,C or G

<400> 26
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nnsnnsnnsn snnstcctgg gtccataaaa ctggc 95

<210> 27
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 27
attcacttct gccacgggca acggcgca 28

<210> 28
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 28
tagagccagt tttatggacc cagga 25

<210> 29
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
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<221> VARIANT
<222> (1)...(36)
<223> Xaa = Any Amino Acid

<400> 29
Lys Val Ala Leu Ala Pro Leu Pro Val Ala Glu Val Asn Pro Pro Ala
1 5 10 15
Pro Pro Val Lys Ala Ser Trp Val His Lys Thr Gly Ser Thr Gly Gly
20 25 30
Phe Gly Ser Xaa

35

<210> 30
<211> 42
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic library sequence

<221> VARIANT
<222> (1)...(42)
<223> Xaa = Any Amino Acid

<400> 30
Lys Val Ala Leu Ala Pro Leu Pro Val Ala Glu Val Asn Glu Tyr Asp
1 5 10 15
Arg Arg Leu Asp Ala Ser Leu Cys Phe Val Lys Ser Trp Val His Lys
20 25 30
Thr Gly Ser Thr Gly Gly Phe Gly Ser Xaa
35 40

<210> 31
<211> 42
<212> PRT
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<220>
<223> synthetic library sequence

<221> VARIANT
<222> (1)...(42)
<223> Xaa = Any Amino Acid

<400> 31
Lys Val Ala Leu Ala Pro Leu Pro Val Ala Glu Val Asn Glu Gln Gln
1 5 10 15
Glu Glu Glu Ala Gly Thr Ser Lys Val Gly Pro Ser Trp Val His Lys
20 25 30
Thr Gly Ser Thr Gly Gly Phe Gly Ser Xaa
35 40

<210> 32
<211> 42
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic library sequence

<221> VARIANT
<222> (1)...(42)
<223> Xaa = Any Amino Acid

<400> 32
Lys Val Ala Leu Ala Pro Leu Pro Val Ala Glu Val Asn Gln Gly Thr
1 5 10 15

Glu	Leu	Arg	Phe	Lys	Leu	Lys	Leu	Lys	Arg	Glu	Ser	Trp	Val	His	Lys
			20					25					30		
Thr	Gly	Ser	Thr	Gly	Gly	Phe	Gly	Ser	Xaa						
		35					40								

<210> 33
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic library sequence

<221> VARIANT
 <222> (1)...(42)
 <223> Xaa = Any Amino Acid

Lys	Val	Ala	Leu	Ala	Pro	Leu	Pro	Val	Ala	Glu	Val	Asn	Arg	Gly	Leu
1				5					10					15	
Pro	Thr	Trp	Thr	Ala	Leu	Val	Glu	Lys	Pro	Gly	Ser	Trp	Val	His	Lys
			20					25					30		
Thr	Gly	Ser	Thr	Gly	Gly	Phe	Gly	Ser	Xaa						
		35					40								

<210> 34
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 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic library sequence

<221> VARIANT
 <222> (1)...(42)
 <223> Xaa = Any Amino Acid

Lys	Val	Ala	Leu	Ala	Pro	Leu	Pro	Val	Ala	Glu	Val	Asn	Ala	Ile	Arg
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Val	Asp	Leu	Gly	Pro	Ser	Ser	Arg	Ser	Arg	Arg	Ser	Trp	Val	His	Lys
			20					25					30		
Thr	Gly	Ser	Thr	Gly	Gly	Phe	Gly	Ser	Xaa						
		35					40								

<210> 35
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 <213> Artificial Sequence

<220>
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<221> VARIANT
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 <223> Xaa = Any Amino Acid

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 1 5 10 15
 Thr Thr Ser Asp Glu Val Val Gly Thr Gln Lys Ser Trp Val His Lys
 20 25 30
 Thr Gly Ser Thr Gly Gly Phe Gly Ser Xaa
 35 40

<210> 36
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic library sequence

<221> VARIANT
 <222> (1)...(42)
 <223> Xaa = Any Amino Acid

<400> 36
 Lys Val Ala Leu Ala Pro Leu Pro Val Ala Glu Val Asn Tyr Thr Ser
 1 5 10 15
 Val Gly Ala Gly Trp Arg Ala Gln Ala Val Gly Ser Trp Val His Lys
 20 25 30
 Thr Gly Ser Thr Gly Gly Phe Gly Ser Xaa
 35 40

<210> 37
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
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<221> VARIANT
 <222> (1)...(42)
 <223> Xaa = Any Amino Acid

<400> 37
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 1 5 10 15
 Val Val Pro Ser Tyr Leu Val Arg His Asp Ser Ser Trp Val His Lys
 20 25 30
 Thr Gly Ser Thr Gly Gly Phe Gly Ser Xaa
 35 40

<210> 38
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic library sequence

<221> VARIANT

<222> (1)...(42)

<223> Xaa = Any Amino Acid

<400> 38

Lys	Val	Ala	Leu	Ala	Pro	Leu	Pro	Val	Ala	Glu	Val	Asn	Gln	Thr	Leu
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Asn	Thr	Ser	Thr	Ile	Met	Pro	Arg	Ser	Pro	His	Ser	Trp	Val	His	Lys
			20					25					30		
Thr	Gly	Ser	Thr	Gly	Gly	Phe	Gly	Ser	Xaa						
		35					40								

<210> 39

<211> 42

<212> PRT

<213> Artificial Sequence

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<223> synthetic library sequence

<221> VARIANT

<222> (1)...(42)

<223> Xaa = Any Amino Acid

<400> 39

Lys	Val	Ala	Leu	Ala	Pro	Leu	Pro	Val	Ala	Glu	Val	Asn	Gly	Gly	Arg
1				5					10					15	
Lys	Asp	Gly	Trp	Pro	Arg	Gln	Gly	Lys	Glu	Gly	Ser	Trp	Val	His	Lys
			20					25					30		
Thr	Gly	Ser	Thr	Gly	Gly	Phe	Gly	Ser	Xaa						
		35					40								

<210> 40

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> loop library sequence

<221> VARIANT

<222> (1)...(14)

<223> Xaa = Any Amino Acid

<400> 40

Xaa	Glx	Xaa	Glx	Xaa	Glx	Lys	Glx	Xaa	Glx	Xaa	Glx	Xaa	Glx
1				5				10					

<210> 41

<211> 95

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<221> misc_feature

<222> (1)...(95)

<223> n = A,T,C or G

<400> 41

cgcttgccg cc gttgcccgtg gcagaagtga atsngdhcsn gdhcsngdhc aagdhcsngd 60
hcsngdhcsn gdhctcctgg gtccataaaa ctggc 95

<210> 42

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 42

attcacttct gccacgggca acggcgca 28

<210> 43

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 43

tagagccagt tttatggacc cagga 25